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Application No. 10/697,518

Reply to Final Office Action of May 28, 2009

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (previously presented) A probe comprising:

a plurality of transducers; and

a plurality of reconfigurable pulsers within said probe responsive to one or more transmit timing signals received from an external system to transmit pulses to said plurality of transducers, wherein each reconfigurable pulser is coupled to a respective transducer, and wherein said probe further includes a multiplexer that receives said timing signals from said external system and provides said signals to said plurality of transducers.

Claim 2. (original) A probe in accordance with Claim 1 wherein said plurality of pulsers are responsive to a low voltage analog transmit timing signal.

Claim 3. (canceled)

Claim 4. (original) A probe in accordance with Claim 1 further comprising a low voltage multiplexer configured to couple said transmit timing signals received from said external system to said pulsers.

Claim 5. (original) A probe in accordance with Claim 4 wherein each said transducer is responsive to a dedicated said pulser.

Claim 6. (original) A probe in accordance with Claim 1 wherein said pulsers comprise pulsers selected from the set consisting of bipolar pulsers, unipolar pulsars, and combinations thereof, and further comprising conversion circuitry configured to convert said transmit timing signals to low voltage signals to operate said pulsers.

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Claim 7. (original) A probe in accordance with Claim 1 further comprising a digital to analog converter (DAC) in said handle, said DAC responsive to a digital transmit timing signal received from the external system to convert the digital transmit timing signal to an analog timing signal, and said pulsers are responsive to said analog timing signal.

Claim 8. (original) A probe in accordance with Claim 1 wherein said transducers are ultrasound transducers and the pulsers are responsive to one or more transmit timing signals received from an imaging system.

Claims 9.-12. (canceled)

Claim 13. (previously presented) A probe comprising:

a plurality of transducers;

an array of reconfigurable pulsers, each transducer responsive to pulses from a dedicated said reconfigurable pulser, wherein each reconfigurable pulser is coupled to a respective transducer;

a low voltage multiplexer responsive to a control signal from an external system and configured to distribute signals to said array of reconfigurable pulsers;

wherein said reconfigurable pulsers are responsive to said signals from said multiplexer to generate respective pulses to said transducers.

Claim 14. (original) A probe in accordance with Claim 13 wherein said transducers are ultrasonic transducers and the external system is an imaging system.

Claims 15.-20. (canceled)

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Claim 21. (previously presented) A method for operating a transducer probe comprising:

- generating one or more signals in an external system;
- sending said one or more signals from said external source to a multiplexer included in said probe;
- providing said one or more signals from said multiplexer to a plurality of transducers;
- controlling a plurality of reconfigurable pulsers in a probe utilizing the one or more signals from the external system; and
- operating said plurality of transducers utilizing signals from said plurality of reconfigurable pulsers, wherein each reconfigurable pulser is coupled to a respective transducer.

Claim 22. (original) A method in accordance with Claim 21 wherein said signals from the external system comprise timing signals.

Claim 23. (original) A method in accordance with Claim 22 wherein said operating a plurality of transducers utilizing signals from said plurality of pulsers comprises operating each said transducer utilizing a signal from a dedicated said pulser.

Claim 24. (original) A method in accordance with Claim 21 further comprising generating timing signals in a handle of the probe utilizing said one or more signals from the external system.

Claim 25. (original) A method in accordance with Claim 21 wherein the external system is an imaging system and said transducers are ultrasound transducers.

Claim 26. (previously presented) A method for operating a transducer probe comprising:

- generating one or more signals in the transducer probe;
- sending said one or more signals from said external source to a multiplexer included in

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said probe;

providing said one or more signals from said multiplexer to a plurality of transducers;

controlling a plurality of reconfigurable pulsers in the probe utilizing the one or more signals generated in the transducer probe, wherein each reconfigurable pulser is coupled to a respective transducer; and

operating said plurality of transducers utilizing signals from said plurality of reconfigurable pulsers.

Claim 27. (original) A method in accordance with Claim 26 further comprising sending control signals from the probe to an external system.